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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,332	03/28/2001	Ramesh Varadaraj	PM 98.079	4239

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ExxonMobil Upstream Research Company
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EXAMINER

WEBB, GREGORY E

ART UNIT PAPER NUMBER

1751

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/819,332

Applicant(s)

VARADARAJ ET AL.

Examiner

Gregory E. Webb

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-84 is/are pending in the application.
- 4a) Of the above claim(s) 1-40, 83 and 84 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 41-44, 54, 66-68, 81 and 82 is/are rejected.
- 7) ☒ Claim(s) 45-53, 55-65 and 69-80 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The following is in response to the applicant's election dated 9/7/04.
2. The applicant argues that the groups should be considered together. The examiner disagrees and feels that a separate search is required for each group as each group is directed to an independent invention falling within three different statutory categories.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(c) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 41, 42, 43, 54, 81, and 82 are rejected under 35 U.S.C. 102(b) as being anticipated by Sawdon (US 5,627,143).
5. Sawdon teaches a biodegradable wellbore fluid having a continuous oil phase (see abstract). Sawdon teaches the addition of polyunsaturated olefin as a polymeric substituent (see abstract).
6. Sawdon teaches the use of these fluid for injecting into a wellbore and using the fluid to assist in the recovery of hydrocarbons (see col. 1, lines 20-44).
7. Sawdon teaches these polymers to be a biodegradable substance (see col. 2, lines 10-18). Sawdon teaches the amount of the polymer to be in amounts ranging from 0-35% of the composition.
8. Sawdon further teaches the addition of biological substances required by bacteria. These nutrients increase the biological activity of the wellbore fluid (see col. 3, lines 30-48).
9. Claims 41-44, 66, 67, 68, 81, and 82 are rejected under 35 U.S.C. 102(b) as being anticipated by McDonald et al (US 4,282,928).
10. McDonald teaches the recovery of hydrocarbons from subterranean formation using discrete spheroidal microgels of a cross-linked polyacrylamide (see abstract).
11. McDonald teaches the addition of monomer and co-monomer to the oil in an emulsified state (see col. 5, lines 1-16). McDonald teaches the use of polymerization initiators to form the modified polymer (see col. 5, lines 50-68). McDonald teaches the use of ultraviolet light as the initiator (see col. 6, lines 1-3).
12. McDonald teaches the addition of secondary compounds such as glycol, alcohols, etc. (see col. 7, lines 22-37). McDonald teaches the use of the polymer in amounts ranging from

100-50,000 ppm of the net fluid (see col. 6, lines 32-55). Noting that 50,000 ppm is roughly equivalent to 5 weight percent. Thus the range of McDonald falls within the applicant's claimed range.

13. McDonald describes the method of using these fluids in claim 2 (see col. 12).

14. Claims 41-43, 66- 68, 81, and 82 are rejected under 35 U.S.C. 102(b) as being anticipated by Phillips (US 4,248,304).

15. Phillips teaches a process for recovery of hydrocarbons (see abstract). Phillips teaches the use of polyacrylamide being added to a water in oil emulsion.

16. Phillips teaches the specific steps of forming a water-in-oil emulsion of monomer, polymerizing the monomer, injecting the emulsion and recovery of oil (see cols. 3-4).

17. Phillips teaches the amount of polymer to be 5-60% of the net composition, a range much more broadly described than the applicant's narrow range of 0.01-1%.

18. Phillips teaches the use of ultraviolet light to activate the monomer and form the polymer (see col. 9, lines 28-31).

19. Claims 41-43, 51, 53, 81, and 82 are rejected under 35 U.S.C. 102(b) as being anticipated by Holm (US 4,011,908).

20. Holm teaches a process for recovery of hydrocarbons from a subterranean well (see abstract). Holm teaches the formation of either water-in-oil or oil-in-water emulsions (see abstract; see also claims 7-14). Holm teaches the addition of polymers to the emulsion including polyacrylamide and modified cellulose (see col. 12, lines 1-20). Holm teaches the addition of solid particles including clays (see col. 12, lines 40-64).

Allowable Subject Matter

21. Claims 45-53,55-65 and 69-80 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
22. The prior art fails to teach an emulsion for use as a wellbore fluid which contains a sulfonating agent and/or sulfuric acid. Nor does the prior art teach or suggest the use of ammonium hydroxide or measuring the pH prior to use. The prior art fails to teach or suggest specifically adding microbes to the well bore composition. The prior art fails to teach photochemically treating the wellbore fluid in combination with the use of solid particles.

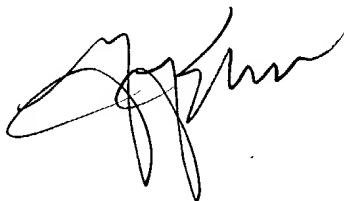
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory E. Webb whose telephone number is 571-272-1325. The examiner can normally be reached on 9:00-17:30 (m-f).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Gregory E. Webb', with a stylized, cursive script.

Gregory E. Webb
Primary Examiner
Art Unit 1751

gw